Abstract

This invention discloses novel prepro-insulin polypeptides. The polypeptides consist of an N-terminal region, derived from N-terminal regions of secretory proteins, and a downstream insulin polypeptide region. The N-terminal region directs the polypeptides efficiently into the secretory pathway of yeasts. Modifications at the N-terminal region, just adjacent to the insulin polypeptide region, further increase the efficiency of secretion and improves the final yield of secreted insulin. The patent also discloses expression systems for the expression of said polypeptides under the regulation of yeast derived alcohol inducible promoters. Thus a combination of such promoters and precursors with the said N-terminal regions appear to function as very high yielding expression systems in yeasts.